

REMARKS

Cross References

The cross reference section has been updated.

Antecedent Basis

The specification has been amended to cure the antecedent basis issue raised in paragraph 3 of the Office Action. Support for the amendment is in the original filing at page 12, line 15-20 (original claim 11), see MPEP §608.01(o).

35 USC §112

In response to paragraph 4 of the Office Action, German Standards DIN 53426 and BMW specification 1933613.3 are submitted herewith as Exhibits A and B, with English translations. These establish loss factor determination in support of Claim 2.

In response to paragraph 5 of the Office Action, rejecting under §112(2) the language "coarse-grain;" the phrase "coarse-grain" has been amended in the claims to recite "particles in a size range from about 0.1 millimeters to about 1 centimeter". This recitation is supported in the original application at page 3, line 4.

In response to paragraph 6 of the Office Action regarding claim 12, the claim has been amended to properly recite a Markush group.

In response to Office Action paragraph 7 rejecting under §112(2), claims 3, 4, 17 and 18, the word "effective" is recited to properly account for unsubstantial variance in diameter measurement. The undersigned counsel believes this is simply a matter of translation from the German language. The claims have been amended to properly recite in U.S. format the ranges

"substantially" as stated of "about" the recited range. The word "effective" has been deleted.

This amendment does not narrow the claim.

With regard to paragraph 8 of the Office Action, Applicant's response to the Office Actions §112 rejection based upon the word "solid" is resolved as follows. The word "solid" has been removed from claim 1, thereby broadening it in that respect. The same amendment has also been made to dependent claims, 3, 4, 5, 6, 17 and 18. New claims 19, 20, 21 and 22 are added. These new claims sufficiently address the concerns raised in paragraph 8 of the Office Action. The meaning of "solid" is well known. Applicants are entitled to claim as broadly as they see fit, and the word "solid" is used repeatedly in the recitation.

Claim 19 depends from claim 18 and recites that the particles are solid. Claim 19 does not include particles made of cork, cork flour, or foam or wood pieces, wood chips, textile fibers and textile pieces. Claim 20 depends from claim 18 and recites that the particles are cork pieces, cork flour, or foam flakes. Claim 21 depends from claim 18 and recites that the particles are wood pieces or wood chips. Claim 22 depends from Claim 18 and recites that the particles are textile fiber and textile pieces. The meanings of each of these recitations are apparent from the claim language itself and well supported in the original specification. Any incongruity such as is argued in the Office Action between "solid" and particles "clearly containing void spaces," is resolved. The limitations appear in separate claims. It is beyond doubt that the specification complies with 35 USC §112(1) and that the claims reasonably convey to one skilled in the art Applicant's clear possession of the invention.

35 USC §103

Claims 1-18 stand rejected under 35 USC 103(a) as unpatentable over Schapel et al. ('834) in view of Ehrlich, Jr. ('702) and Fracalossi et al. ('221).

The Ehrlich reference teaches away from the present invention. Particulate inclusions in the Ehrlich reference are used for the purpose of stiffening the polyurethane, see column 2, lines 41-46. The present invention is directed towards a part that is not as stiff. Ehrlich teaching away from the structure and the characteristics of the structure recited in the pending claims, Ehrlich cannot suggest, motivate or render obvious any of the presently pending claims.

Fracalossi also teaches away. The particles in the Fracalossi reference are in the range of 1 to 30 microns, orders of magnitude differently sized from the structure recited in the presently pending claims, the smallest of which is about 0.1 millimeters.

The rest of the new claims recite structural limitations that are supported in the examples and comparative testing sections of the specification of the present application, and are not anticipated, suggested or motivated in any of the prior art references on record. Applicant respectfully requests their allowance.

Optical Appearance

The amendments introduced herewith include the addition of an "optically clear" limitation modifying the polyurethane gel and, in claim 17, that the particle sizes be visually recognizable.

The visual appearance of the product is a very important aspect of the invention. This is documented in the original description at page 3 of 14 from line 22:

"The composite material advantageously has an interesting, appealing appearance... The visual appearance is determined by the coarse grain property of the incorporated particles... Since the particles can be recognized discretely, a visually novel gel composite material is produced."

On page 4 of 14 of the description, lines 5 -7:

"However the visual attractiveness of the resulting composite material of the invention is particularly noteworthy."

"The solids are characterized in that they have a particle size of 0.1 mm to about 15 mm. Hence, they are discrete particles, which can be differentiated by the eye. The composite material is visibly grainy... The combination of the gel, which is as clear as glass in the basic state, with the irregular solid gives an attractive appearance to the composite material parts of the invention."

The particulate fillers in the Ehrlich and Fracalossi references are fine grained, and they are not visible as discrete particles even when they are in a clear material. Of course, neither Ehrlich nor Fracalossi teaches a clear material. Accordingly, while the amendments to size are sufficient to overcome the cited art and render the claims allowable, the addition of the optically clear limitation stands as a separate, independent distinguishing structural recitation in the claims making them allowable over the cited references.

Elasticity of Material

An additional distinguishing feature between the composite gel with particulate inserts of the present invention as claimed and the Ehrlich and Fracalossi prior art references is the difference in the elasticity or hardness of the materials. Simply put, the present invention is a soft elastic material with particulate inserts and the prior art references are hard polymers. The prior references include particulate inserts in order to stiffen the material and make it harder, or at least to make it as hard with less expensive materials. By contrast, the present invention has a

degree of elasticity or softness that is maintained in combination with a visually appealing appearance in a novel and non-obvious way by combining the gel and particulate inserts.


This degree of elasticity is structurally recited in the presently pending claims. This includes without limitation claim 2 claiming a loss factor, new claim 25 claiming a density, new claim 26 claiming a hardness rating, new claim 27 claiming a tensile strength, new claim 28 claiming a storage modulus, and new claims 29 and 30 claiming a loss factor. These claims are supported in the application at page 6, line 12 through the end as well as at page 4 lines 1-2 and page 1 lines 12-14.

Conclusion

It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, he is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment is respectfully requested.

Respectfully submitted,



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